

I claim:

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1. A method of distributing routing information through a plurality of network devices, the plurality of network devices being members of a single domain, each of the network devices operating in accord with given policy relating to routing information, the method comprising:

receiving, from outside the domain, an information message at one of the network devices, the information message having routing information;

applying the given policy of the network device that received the information message to the routing information in the information message to produce policy filtered routing information; and

flooding the policy filtered routing information to each of the plurality of network devices.

2. The method as defined by claim 1 wherein the plurality of network devices are in a ring connectivity.

3. The method as defined by claim 1 wherein the plurality of network devices comprises at least three network devices, the at least three network devices including a given network device that is connected with no more than one other of the plurality of network devices.

4. The method as defined by claim 1 wherein the act of flooding comprises adding a link state advertisement header to the policy filtered routing information.

5. The method as defined by claim 1 wherein the policy filtered routing information comprises the received routing information in the information message.

6. The method as defined by claim 1 further comprising storing the routing information in local data storage.

7. The method as defined by claim 1 wherein the given policy is set by an

administrator.

8. An apparatus for distributing routing information to a plurality of network devices, the plurality of network devices being members of a first domain, each of the network
5 devices operating in accord with given policy relating to routing information, the apparatus comprising:

an input coupled with a network device in a second domain, the input receiving an information message from the network device in the second domain, the information message having routing information;

10 a policy module coupled with the input, the policy module applying the given policy to the routing information in the information message to produce policy filtered routing information; and

an output coupled with the policy module, the output flooding the policy filtered routing information to each of the plurality of network devices.

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9. The apparatus as defined by claim 8 wherein the plurality of network devices are in a ring connectivity.

10. The apparatus as defined by claim 8 wherein the plurality of network devices
20 comprises at least three network devices, the at least three network devices including a given network device that is connected with no more than one other of the plurality of network devices

11. The apparatus as defined by claim 8 further comprising a link state module for
25 adding a link state advertisement header to the policy filtered routing information.

12. The apparatus as defined by claim 8 wherein the policy based routing information comprises the received routing information in the information message.

30 13. The apparatus as defined by claim 8 further comprising memory for storing the routing information.

14. The apparatus as defined by claim 8 wherein the given policy is set by an administrator.

15. A computer program product for use in a network device in a first domain of
5 network devices, the computer program product comprising a computer usable medium having computer readable program code thereon, the computer readable program code comprising:

program code for receiving an information message having routing information from a network device in a second domain;

10 program code for applying policy to the routing information in the information message to produce policy filtered routing information; and

program code for flooding the policy filtered routing information to each peer network device in the first domain.

15 16. The computer program product as defined by claim 15 wherein the first domain of network devices are in a ring connectivity.

17. The computer program product as defined by claim 15 wherein the first domain of network devices comprises at least three network devices, the at least three network
20 devices including a given network device that is connected with no more than one other of the plurality of network devices.

18. The computer program product as defined by claim 15 wherein the program code for flooding comprises program code for adding a link state advertisement header to the
25 policy filtered routing information.

19. The computer program product as defined by claim 15 wherein the policy filtered routing information comprises the received routing information in the information message.

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20. The computer program product as defined by claim 15 further comprising program code for storing the routing information in local data storage.

21. The computer program product as defined by claim 15 wherein the policy is set by an administrator.

22. A network device in a first domain operating in accord with a given policy relating to routing information, the network device comprising:

an input coupled with a network device in a second domain, the input receiving an information message from the network device in the second domain, the information message having routing information;

a policy module coupled with the input, the policy module applying the given policy to the routing information in the information message to produce policy filtered routing information; and

an output coupled with the policy module, the output flooding the policy filtered routing information to each peer network device in the first domain.

23. The network device of claim 22 further comprising a link state module for adding a link state advertisement header to the policy filtered routing information.

24. A method of distributing routing information from a network device, the network device being a member of a single domain and operating in accord with a given policy relating to routing information, the method comprising:

receiving, from within the domain, an information message with a link state advertisement header at one of the network devices, the information message having routing information;

applying the given policy of the network device that received the information message to the routing information in the information message to produce policy filtered routing information; and

forwarding the policy filtered routing information to a network device in another domain.

25. A network device in a first domain operating in accord with a given policy relating to routing information, the network device comprising:

an input coupled with a network device in the first domain, the input receiving an

information message with a link state advertisement header from the network device in the first domain, the information message having routing information;

a policy module coupled with the input, the policy module applying the given policy to the routing information in the information message to produce policy filtered

5 routing information; and

an output coupled with a network device in a second domain, the output forwarding the policy filtered routing information to the network device in the second domain.

- 10 26. The network device of claim 25 further comprising a link state module for flooding the information message with a link state advertisement header to each peer network device in the first domain.

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100